Claims

Claim 1. (Currently Amended) A method of operating an oscilloscope that is capable of displaying simultaneously multiple waveforms representing time evolution of a signal during respective acquisition intervals, comprising:

(a) acquiring waveform data using a first set of acquisition parameters,

(b) generating a display based on the waveform data acquired in step (a),

in the event that the display generated in step (b) includes a waveform that is visually distinct from other displayed waveforms,

(c) selecting a feature within the displayed waveforms that distinguishes the visually distinct waveform from other displayed waveforms,

(d) automatically deriving a second set of acquisition parameters that discriminate between the selected feature and other features of the displayed waveforms,

(e) acquiring waveform data using the second set of acquisition parameters derived in step (d), and

(f) generating a display based on the waveform data acquired in step (e).

Claim 2. (Currently Amended) A method according to claim 1, wherein step (c) includes graphically defining a template that specifies the selected feature and step (d) includes employing information regarding the template to derive said ~~additional~~ second set of acquisition parameters.

Claim 3. (Original) A method according to claim 1, wherein the oscilloscope has multiple trigger modes, step (c) includes graphically defining a template that specifies the selected feature and step (d) includes employing information regarding the template to select a trigger mode for preferentially acquiring waveforms that include the selected feature.

Claim 4. (Currently Amended) A method according to claim 3, wherein the template is a ~~scaleable~~ scalable rectangular box and step (c) includes positioning and sizing the box so that it contains the selected feature.

Claim 5. (Original) A method according to claim 2, wherein the oscilloscope has a display screen on which the waveforms are displayed and the template is a sketch generated on the display screen.

Claim 6. (Currently Amended) An oscilloscope that is capable of displaying simultaneously multiple waveforms representing time evolution of a signal during respective acquisition intervals, said oscilloscope comprising:

an acquisition means for acquiring waveform data using a first set of acquisition parameters,

a display means for generating a display based on the waveform data acquired by the acquisition means,

a user control means that can be used in the event that the display generated by the display means includes a waveform that is visually distinct from other displayed waveforms to select a feature within the displayed waveforms that distinguishes the visually distinct waveform from other displayed waveforms, and

an oscilloscope control means for automatically deriving a second set of acquisition parameters that discriminate between the selected feature and other features of the displayed waveforms, and for supplying the ~~derived~~ second set of acquisition parameters to the acquisition means, whereby the acquisition means can acquire waveform data using the ~~derived~~ second set of acquisition parameters and the display means can generate a display based on the waveform data acquired by the acquisition means using the ~~derived~~ second set of acquisition parameters.